IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

1-21. (Previously cancelled)

22. (previously amended) A gas flow sensor, comprising:

a reference resistor element comprised of an oxide electrically resistive material;

a flow-sensing resistor element comprised of said oxide electrically resistive material; and

an electrical circuit coupled to said reference resistor element and said flow-sensing resistor element, said electrical circuit responsive to a ratio in resistance between said reference oxide electrically resistive material and said flow-sensing oxide electrically resistive material wherein said ratio in resistance is a function of a rate of gas flow over said materials.

23. (previously presented) The gas flow sensor according to claim 22, wherein said oxide electrically resistive material comprises a ruthenium-containing oxide in a glassy matrix.

24. (previously presented) The gas flow sensor of claim 22 wherein a temperature of said reference resistor is substantially similar to a temperature of a gas flow flowing past said resistors.

25. (previously amended) The gas flow sensor of claim 24 wherein said electrical circuit further comprises a current source coupled to said flow-sensing resistor and said electrical circuit is adapted to adjust a current flow from said current source to maintain a predetermined resistance ratio between said flow-sensing resistor and said reference resistor.

26. (previously presented) The gas flow sensor of claim 22 wherein said gas is air.

27. (previously amended) The gas flow sensor of claim 22, wherein said electrical circuit is capable of determining a resistance of said reference resistor and a resistance of said flow-sensing resistor, and a mass flow rate of said gas flow is a function of said resistances.

28. (previously amended) The gas flow sensor of claim 22 wherein said electrical circuit further comprises a current source coupled to said flow-sensing resistor element and said electrical circuit is capable of maintaining a target temperature differential between said reference resistor element and said flow-sensing resistor element by controlling current flow to said flow-sensing resistor element.

29-32. (canceled)

33. (previously amended) A gas flow sensor, comprising:

a reference resistor element comprised of an oxide electrically resistive material attached to a first portion of an electrically insulating substrate ;

a flow-sensing resistor element comprised of said oxide electrically resistive material and attached to a second portion of said electrically insulating substrate material; and

an electrical circuit coupled to said reference resistor element and said flow-sensing resistor element, said electrical circuit responsive to a ratio in resistance between said reference oxide electrically resistive material and said flow-sensing oxide electrically resistive material wherein said ratio in resistance is a function of a rate of gas flow over said materials, said electrical circuit further comprising a current source coupled to said flow-sensing resistor and said electrical circuit is adapted to adjust a current flow from said current source to maintain a predetermined resistance ratio between said flow-sensing resistor and said reference resistor.

34. (previously presented) The gas flow sensor according to claim 33, wherein said oxide electrically resistive material comprises a ruthenium-containing oxide in a glassy matrix.

35. (currently amended) The gas flow sensor according to claim 343 wherein said ruthenium-containing oxide resistor elements comprises at least one of: Pb, Si and Bi.

36. (previously presented) The gas flow sensor according to claim 33, wherein said reference resistor has an electrical resistance at least 10 times the electrical resistance of said flow-sensing resistor.

37. (previously presented) The gas flow sensor according to claim 33, wherein said reference resistor element and said flow-sensing resistor element each have a thickness between 2 and 30 micrometers.

38. (previously presented) The gas flow sensor according to claim 33, wherein said reference resistor element and said flow-sensing resistor element each has a thickness between 5 and 20 micrometers.

39. (previously presented) The gas flow sensor according to claim 33 wherein said reference resistor element is formed in a serpentine configuration.

40. (previously presented) The gas flow sensor according to claim 33 wherein said reference resistor element is formed in a serpentine configuration having vertical segments connected by horizontal segments with an aspect ratio of length/width of the resistor being at least 2.

41. (previously presented) The gas flow sensor according to claim 33 wherein said electrical circuit maintains a target temperature differential between said reference resistor element and said flow-sensing resistor element by controlling an electrical current flowing to said flow-sensing resistor element.

42-46. (canceled)

47. (previously presented) The gas flow sensor of claim 22 wherein said reference resistor element and said flow-sensing resistor element are coupled to an electrically insulating substrate.

48. (previously presented) The gas flow sensor of claim 22 wherein said reference resistor element is coupled to a first electrically insulating substrate and said flow-sensing resistor element is coupled to a second electrically insulating substrate.

49. (previously presented) The gas flow sensor of claim 22 wherein said resistor elements have a temperature coefficient of resistance in the range of about 2600 to 3800 ppm/°C.

50. (previously presented) The gas flow sensor of claim 33 wherein said first and second portions of said electrically insulating substrate are contiguous.

51. (previously presented) The gas flow sensor of claim 33 wherein said first and second portions of said electrically insulating substrate are separated.

52. (previously presented) The gas flow sensor of claim 33 wherein said resistor elements have a temperature coefficient of resistance in the range of about 2600 to 3800 ppm/°C.